

## ABSTRACT OF THE DISCLOSURE

### AUTOMATED SCALABLE AND ADAPTIVE SYSTEM FOR MEMORY ANALYSIS VIA THE DISCOVERY OF CO-EVOLVING REGIONS

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A method for identifying co-evolving regions in the memory of a target application comprises the steps of: receiving information identifying a set of data structures that are evolving; and classifying the constituents of the data structures based on their likelihood to evolve in a single coherent manner. Classifying the constituents of the data structures based on their likelihood to evolve in a single coherent manner further comprises determining coherency by similarity of key structural features and data type of the constituents. The method also comprises qualitative and quantitative characterizations of the co-evolving regions based on their observed evolutions.

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